



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/614,961	07/13/2000	Richard L. Antrim	205733	6954

7590

09/09/2003

Allen E Hoover
Leydig Voit & Mayer Ltd
Two Prudential Plaza Suite 4900
180 North Stetson Street
Chicago, IL 60601-6780

EXAMINER

OWENS JR, HOWARD V

ART UNIT

PAPER NUMBER

1623

DATE MAILED: 09/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/614,961

Applicant(s)

ANTRIM ET AL.

Examiner

Howard V Owens

Art Unit

1623

The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-8, 10-14, 16-18 and 23-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 2-8, 10-14, 16-18, 23-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

The following is in response to the amendment filed 4/1/03:

An action on the merits of claims 2-8, 10-14, 16-18 and 23-25 is contained herein below.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

The rejection of claims 16-18 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention has been overcome through applicant's amendment to the claims

Double Patenting

The nonstatutory double patenting rejection of claim 5 as being unpatentable over claims 1-5 and 21-24 of copending Application No. 09/366,065 ('065) is maintained for the reasons of record, set forth below.

Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 5 is generic to all that is recited in claims 1-5 and 21-24 of '065. That is, claims 1-5 and 21-24 of '065 fall entirely within the scope of claim 5. Claim 5 anticipates claims 1-5, 21-24 given that the same method of reducing the malto-oligosaccharide through catalytic hydrogenation wherein the DP profile is preserved and the DE is essentially zero is employed, the only difference is a specific DP profile to be preserved is set forth. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

The rejection of claims 1-15 and 19-22 under 35 USC §102(b) has been overcome through applicant's cancellation of claims and amendments to the claims.

Claim Rejections - 35 USC § 103

Applicant's arguments filed 4/1/03 have been fully considered but they are not persuasive. The rejection of claims 2-8, 10-14, 16-18 and 23-25 under 35 U.S.C. § 103 as being unpatentable over Borden et al., U.S. Patent No. 5,601,863 is maintained for the reasons of record set forth below.

Claims 2-8, 10-14, 16-18 and 23-25 are drawn to a method for reducing a mixture of a plurality of malto-oligosaccharide species to a DE of essentially zero, comprising catalytically hydrogenating said mixture of malto-oligosaccharide species, wherein at least 40% of said malto-oligosaccharides have a DP value greater than 10, under hydrogenation conditions suitable to substantially preserve the DP profile of said mixture wherein the temperature ranges from about 50° C to about 150° C and a pressure ranging up to about 1500 psi.

Borden teaches the catalytic hydrogenation of malto-oligosaccharide species, DP ranging from 4 to 52 (1,500 to 18,000 m.w. – col. 2, lines 23-30 and claim 5) using Raney nickel catalyst under conditions of 20° C to 200° C with the pressure ranging from 50 psi to about 3000 psi (col.3 – col.4) and pH 3 to 9. Borden teaches that the hydrogenation is carried out until there are substantially no reducing glucose syrups, less than 1% by weight, which inherently anticipates a DE value of essentially zero.

Borden teaches that the hydrogenation is carried out until there are substantially no reducing glucose syrups because the presence of reducing glucose syrups in malto-oligosaccharides can result in undesirable properties such as dark color, bitter taste and undesirable reactivity with amines.

However, Borden does not teach the specific malto-oligosaccharide compositions wherein the DP profile of the malto-oligosaccharide and the percent weight thereof differs in each composition.

Art Unit: 1623

Although the identical concentration ranges are not disclosed in the reference cited supra, applicant is using commercially available malto-oligosaccharide mixtures wherein ~~the novelty of the invention is not the weight and DP profile of the composition, but the~~ reduction of the DE value to zero with preservation of the DP profile via catalytic hydrogenation of the malto-oligosaccharide mixture.

It would have been *prima facie* obvious to a person of ordinary skill in the art at the time the invention was made to use catalytic hydrogenation to reduce the DE value of a malto-oligosaccharide composition.

A person of ordinary skill in the art would have been motivated to use catalytic hydrogenation to reduce the DE value of a malto-oligosaccharide composition to essentially zero given the art recognized benefits of a reduction/elimination of undesirable properties such as dark color, bitter taste and undesirable reactivity with amines when the malto-oligosaccharides are catalytically hydrogenated to substantially remove the reducing groups present.

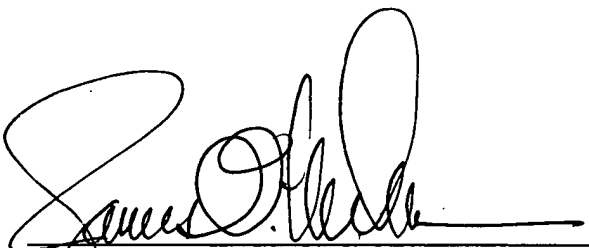
Applicant's have amended the claims to change the actual composition that undergoes the process to at least 40% of said malto-oligosaccharides having a DP value greater than 10. However, the motivation to use catalytic hydrogenation and the process set forth in the prior art withstands. Borden teaches processing of polymaltose (col.2, lines 3-10) which is an α , 1-4 linked polysaccharide, equivalent to the maltooligosaccharides claimed by applicant. Applicant has not provided a response to the motivation provided by the examiner, chiefly that a person of ordinary skill in the art would have used catalytic hydrogenation to reduce the DE value of a malto-oligosaccharide composition to essentially zero given the art recognized benefits of a reduction/elimination of undesirable properties such as dark color, bitter taste and undesirable reactivity with amines when the malto-oligosaccharides are catalytically hydrogenated to substantially remove the reducing groups present. Therefore, the teachings of Borden and the motivation provided by the examiner maintains the basis of the obviousness rejection.

Art Unit: 1623

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

~~A shortened statutory period for reply to this final action is set to expire THREE~~
MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Howard V. Owens
Patent Examiner
Art Unit 1623



James O. Wilson
Supervisory Patent Examiner
Technology Center 1600

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Howard Owens whose telephone number is (703) 306-4538. The examiner can normally be reached on Mon.-Fri. from 8:30 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the Supervisory Patent Examiner signing this action, James O. Wilson can be reached on (703) 308-4624. The fax phone number for this Group is (703) 308-4556.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1235.